Application No.: 10/797758   Case No.: 57630US004

Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

What is claimed is:

1. (Original) A method of automatically converting a web of a thin patterned catalyst-coated membrane to separate membrane sheets for fuel cell assembly, a first side of the membrane web coated with an anode catalyst and a second side of the membrane web coated with a cathode catalyst, the method comprising:

transporting, with use of a movable vacuum, an end portion of the membrane web from a first location to a second location;

securing, with use of respective first and second vacuums at the first and second locations and after removal of the movable vacuum, the end portion of the membrane web at the first and second locations;

cutting the membrane web within a gap defined between a single catalyst pattern of the membrane web end portion and an adjacent catalyst pattern to produce a membrane sheet; and

positioning the membrane sheet to a desired orientation to facilitate subsequent processing of the membrane sheet.

2. (Original) The method of claim 1, wherein the membrane is less than about two thousandths of an inch in thickness.

3. (Original) The method of claim 1, further comprising:

securing, with use of the first vacuum, the end portion of the membrane web at the first location;

moving the movable vacuum to the first location; and

activating the movable vacuum and removing the first vacuum to facilitate transport of the end portion of the membrane web by use of the movable vacuum.

4

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Application No.: 10/797758   Case No.: 57630US004

4. (Original) The method of claim 1, further comprising detecting advancement of the single catalyst pattern to the second location.

5. (Original) The method of claim 4, wherein advancement of the single catalyst pattern is detected optically.

6. (Original) The method of claim 4, wherein advancement of the single catalyst pattern is detected by detecting the gap defined between the single catalyst pattern and the adjacent catalyst pattern.

7. (Original) The method of claim 1, wherein positioning the membrane sheet comprises optically detecting that the membrane sheet is positioned to the desired orientation.

8. (Original) The method of claim 1, wherein positioning the membrane sheet comprises detecting, via camera detection, that the membrane sheet is positioned to the desired orientation.

9. (Original) The method of claim 1, wherein positioning the membrane sheet comprises moving the membrane sheet axially with respect to an x-axis and a y-axis, and rotationally about a z-axis to position the membrane sheet to the desired orientation.

10. (Original) The method of claim 9, further comprising optically detecting that the membrane sheet is positioned to the desired x-axis, y-axis, and rotational orientation.

11. (Original) The method of claim 9, further comprising detecting, via camera detection, that the membrane sheet is positioned to the desired x-axis, y-axis, and rotational orientation.

12. (Original) The method of claim 1, further comprising automatically inspecting the membrane web to detect completeness of membrane patterns.

5

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13. (Original) The method of claim 12, wherein automatically inspecting the membrane web comprises optically inspecting the membrane web.

14. (Original) The method of claim 12, wherein automatically inspecting the membrane web comprises inspecting the membrane web via camera inspection.

15. (Original) The method of claim 1, further comprising automatically inspecting one or both of a size and a quality of membrane patterns.

16. (Original) The method of claim 15, wherein automatically inspecting the membrane patterns comprises optically inspecting the membrane patterns.

17. (Original) The method of claim 15, wherein automatically inspecting the membrane patterns comprises inspecting the membrane patterns via camera inspection.

18.-35. (Canceled)